

Application No. 10/614,148

Reply to Office Action

*AMENDMENTS TO THE CLAIMS*

## Claims 1-7 (Cancelled)

8. (Previously Presented) A process for producing an electroluminescent device, comprising a transparent or translucent support, a transparent or translucent first electrode, a second conductive electrode and an electroluminescent phosphor layer sandwiched between said transparent or translucent first electrode and said second conductive electrode, wherein said first and second electrodes each comprises a polymer or copolymer of a 3,4-dialkoxythiophene, which may be the same or different, in which said two alkoxy groups may be the same or different or together represent an optionally substituted oxy-alkylene-oxy bridge, comprising the steps of: (i) coating a transparent or translucent support with a solution, a dispersion or a paste of a polymer or copolymer of a 3,4-dialkoxythiophene to produce said transparent or translucent first conductive layer; (ii) coating said first conductive layer with a layer comprising an electroluminescent phosphor; (iii) coating said layer comprising an electroluminescent phosphor with a dielectric layer; and (iv) coating said dielectric layer with a solution, dispersion or paste comprising a polymer or copolymer of a 3,4-dialkoxythiophene to produce said second conductive layer, wherein said polymer or copolymer of said 3,4-dialkoxythiophene in the solution, dispersion or paste used in step (i) may be the same or different from said polymer or copolymer of said 3,4-dialkoxythiophene used in the solution, dispersion or paste used in step (iv).

9. (Previously Presented) The process according to claim 8, wherein said paste is an aqueous paste.

10. (Previously Presented) The process according to claim 8, wherein said solution or dispersion is an aqueous solution or dispersion.

Application No. 10/614,148

Reply to Office Action

11. (Previously Presented) A process for producing an electroluminescent device, comprising a transparent or translucent support, a transparent or translucent first electrode, a second conductive electrode and an electroluminescent phosphor layer sandwiched between said transparent or translucent first electrode and said second conductive electrode, wherein said first and second electrodes each comprises a polymer or copolymer of a 3,4-dialkoxythiophene, which may be the same or different, in which said two alkoxy groups may be the same or different or together represent an optionally substituted oxy-alkylene-oxy bridge, comprising the steps of: (i) coating a support with a solution, dispersion or paste comprising a polymer or copolymer of a (3,4-dialkoxythiophene) to produce said second conductive layer; (ii) coating said second conductive layer with a dielectric layer; (iii) coating said dielectric layer with a layer comprising an electroluminescent phosphor; and (iv) coating said layer comprising said electroluminescent phosphor with a transparent solution, dispersion or paste comprising a polymer or copolymer of a (3,4-dialkoxythiophene) to produce said transparent or translucent first conductive layer, wherein said polymer or copolymer of a (3,4-dialkoxythiophene) in said solution, dispersion or paste used in step (i) may be the same or different from said polymer or copolymer of a (3,4-dialkoxythiophene) used in said transparent solution, dispersion or paste used in step (iv).

12. (Previously Presented) The process according to claim 11, wherein said paste is an aqueous paste.

13. (Previously Presented) The process according to claim 11, wherein said transparent paste is an aqueous transparent paste.

14. (Original) A process comprising the steps of: using a transparent paste comprising a polymer or copolymer of a 3,4-dialkoxythiophene, a polyacrylate thickener and a glycol derivative, and optionally a surfactant for producing an electrode of an electroluminescent device comprising a transparent or translucent support, a transparent or translucent first electrode, a second conductive electrode and an electroluminescent phosphor layer sandwiched between said transparent or translucent first electrode and said second conductive electrode, wherein said first and second electrodes each comprises a polymer or copolymer of a 3,4-dialkoxythiophene, which may be the same or different, in which said two

Application No. 10/614,148

Reply to Office Action

alkoxy groups may be the same or different or together represent an optionally substituted oxy-alkylene-oxy bridge.

15. (Original) A process comprising the steps of: using an electroluminescent device, comprising a transparent or translucent support, a transparent or translucent first electrode, a second conductive electrode and an electroluminescent phosphor layer sandwiched between said transparent or translucent first electrode and said second conductive electrode, wherein said first and second electrodes each comprises a polymer or copolymer of a 3,4-dialkoxythiophene, which may be the same or different, in which said two alkoxy groups may be the same or different or together represent an optionally substituted oxy-alkylene-oxy bridge, in illuminated posters and signage.

16. (Cancelled)

17. (New) [The process according to claim 16] A process for producing an electroluminescent device comprising a transparent or translucent support, a transparent or translucent first electrode, a second conductive electrode and an electroluminescent phosphor layer sandwiched between said transparent or translucent first electrode and said second conductive electrode, wherein said first and second electrodes each comprises a polymer or copolymer of a 3,4-dialkoxythiophene, which may be the same or different, in which said two alkoxy groups are represented by -OR<sup>1</sup> and -OR<sup>2</sup> wherein each of R<sup>1</sup> and R<sup>2</sup> independently represents a C1-C4 alkyl group or together represent an optionally substituted C1-C4 alkylene group or a cycloalkylene group, the process comprising the steps of: (i) coating a transparent or translucent support with a solution, a dispersion or a paste of a polymer or copolymer of a 3,4-dialkoxythiophene to produce said transparent or translucent first conductive layer; (ii) coating said first conductive layer with a layer comprising an electroluminescent phosphor; (iii) optionally coating said layer comprising an electroluminescent phosphor with a dielectric layer; and (iv) optionally coating said dielectric layer if present, or said layer comprising the electroluminescent phosphor if no dielectric layer is present, with a solution, dispersion or paste comprising a polymer or copolymer of a 3,4-dialkoxythiophene to produce said second conductive layer, wherein said polymer or copolymer of said 3,4-dialkoxythiophene in the solution, dispersion or paste used in step (i) may be the same or different from said polymer

Application No. 10/614,148

Reply to Office Action

or copolymer of said 3,4-dialkoxythiophene used in the solution, dispersion or paste used in step (iv), wherein said paste is an aqueous paste.

18. (Cancelled)

19. (Cancelled)

20. (Amended) [A process according to claim 18] A process for producing an electroluminescent device comprising a transparent or translucent support, a transparent or translucent first electrode, a second conductive electrode and an electroluminescent phosphor layer sandwiched between said transparent or translucent first electrode and said second conductive electrode, wherein said first and second electrodes each comprises a polymer or copolymer of a 3,4-dialkoxy-thiophene, which may be the same or different, in which said two alkoxy groups are represented by -OR<sup>1</sup> and -OR<sup>2</sup> where each of R<sup>1</sup> and R<sup>2</sup> independently represents a C1-C4 alkyl group or together represent an optionally substituted C1-C4 alkylene group or a cycloalkylene group, comprising the steps of: (i) coating a support with a solution, dispersion or paste comprising a polymer or copolymer of a (3,4-dialkoxythiophene) to produce said second conductive layer; (ii) optionally coating said second conductive layer with a dielectric layer; (iii) coating said dielectric layer if present, or said second conductive layer if no dielectric layer is present, with a layer comprising an electroluminescent phosphor; and (iv) coating said layer comprising said electroluminescent phosphor with a transparent solution, dispersion or paste comprising a polymer or copolymer of a (3,4-dialkoxythiophene) to produce said transparent or translucent first conductive layer, wherein said polymer or copolymer of a (3,4-dialkoxythiophene) in said solution, dispersion or paste used in step (i) may be the same or different from said polymer or copolymer of a (3,4-dialkoxythiophene) used in said transparent solution, dispersion or paste used in step (iv), wherein said paste is an aqueous paste.

21. (Amended) [The process according to claim 18] A process for producing an electroluminescent device, comprising a transparent or translucent support, a transparent or translucent first electrode, a second conductive electrode and an electroluminescent phosphor layer sandwiched between said transparent or translucent first electrode and said second conductive electrode, wherein said first and second electrodes each comprises a polymer or copolymer of a 3,4-dialkoxy-thiophene, which may be the same or different, in which said two alkoxy groups are represented by -OR<sup>1</sup> and -OR<sup>2</sup> wherein each of R<sup>1</sup> and R<sup>2</sup> independently

Application No. 10/614,148

Reply to Office Action

represents a C1-C4 alkyl group or together represent an optionally substituted C1-C4 alkylene group or a cycloalkylene group, the process comprising the steps of: (i) coating a support with a solution, dispersion or paste comprising a polymer or copolymer of a (3,4-dialkoxythiophene) to produce said second conductive layer; (ii) optionally coating said second conductive layer with a dielectric layer; (iii) coating said dielectric layer if present, or said second conductive layer if no dielectric layer is present, with a layer comprising an electroluminescent phosphor; and (iv) coating said layer comprising said electroluminescent phosphor with a transparent solution, dispersion or paste comprising a polymer or copolymer of a (3,4-dialkoxythiophene) to produce said transparent or translucent first conductive layer, wherein said polymer or copolymer of a (3,4-dialkoxythiophene) in said solution, dispersion or paste used in step (i) may be the same or different from said polymer or copolymer of a (3,4-dialkoxythiophene) used in said transparent solution, dispersion or paste used in step (iv), wherein said paste is an aqueous paste.

22. (Previously Presented) A process for producing an electroluminescent device, comprising a transparent or translucent support, a transparent or translucent first electrode, a second conductive electrode and an electroluminescent phosphor layer sandwiched between said transparent or translucent first electrode and said second conductive electrode, wherein said first and second electrodes each comprises a polymer or copolymer of a 3,4-dialkoxythiophene, which may be the same or different, in which said two alkoxy groups may be the same or different or together represent an optionally substituted oxy-alkylene-oxy bridge, comprising the steps of: (i) coating a transparent or translucent support with a solution, a dispersion or a paste of a polymer or copolymer of a 3,4-dialkoxythiophene to produce said transparent or translucent first conductive layer; (ii) coating said first conductive layer with a layer comprising an electroluminescent phosphor; (iii) optionally coating said layer comprising an electroluminescent phosphor with a dielectric layer; and (iv) coating said dielectric layer if present, or said layer comprising the electroluminescent phosphor if no dielectric layer is present, with a solution, dispersion or paste comprising a polymer or copolymer of a 3,4-dialkoxythiophene to produce said conductive layer, wherein said polymer or copolymer of said 3,4-dialkoxythiophene in the solution, dispersion or paste used in step (i) may be the same or different from said polymer or copolymer of said 3,4-dialkoxythiophene used in the solution, dispersion or paste used in step (iv) and wherein said electroluminescent phosphor belongs to the class of II-VI semiconductors or is a combination of a group II element with an oxidic anion.

Application No. 10/614,148

Reply to Office Action

23. (Previously Presented) The process according to claim 22, wherein said paste is an aqueous paste.

24. (Currently Amended) A process for producing an electroluminescent device, comprising a transparent or translucent support, a transparent or translucent first electrode, a second conductive electrode and an electroluminescent phosphor layer sandwiched between said transparent or translucent first electrode and said second conductive electrode, wherein said first and second electrodes each comprises a polymer or copolymer of a (3,4-dialkoxythiophene), which may be the same or different, in which said two alkoxy groups may be the same or different or together represent an optionally substituted oxy-alkylene-oxy bridge, comprising the steps of: (i) coating a support with a solution, dispersion or paste comprising a polymer or copolymer of a (3,4-dialkoxythiophene) to produce said second conductive layer; (ii) optionally coating said second conductive layer with a dielectric layer; (iii) coating said dielectric layer if present, or said second conductive layer if no dielectric layer is present, with a layer comprising an electroluminescent phosphor; and (iv) coating said layer comprising said electroluminescent phosphor with a transparent solution, dispersion or paste comprising a polymer or copolymer of a (3,4-dialkoxythiophene) to produce said transparent or translucent first conductive layer, wherein said polymer or copolymer of a (3,4-dialkoxythiophene) in said solution, dispersion or paste used in step (i) may be the same or different from said polymer or copolymer of a (3,4-dialkoxythiophene) used in said transparent solution, dispersion or paste used in step (iv) and wherein said electroluminescent phosphor belongs to the class of II-VI semiconductors or is a combination of a group II element with an oxidic anion.

25. (Previously Presented) The process according to claim 24, wherein said transparent solution or dispersion is an aqueous solution or dispersion.

26. (Previously Presented) The process according to claim 24, wherein said paste is an aqueous paste.

27. (Previously Presented) The process according to claim 24, wherein said transparent paste is an aqueous paste transparent paste.

Application No. 10/614,148

Reply to Office Action

28. (Previously Presented) A process for producing an electroluminescent device, comprising a transparent or translucent support, a transparent or translucent first electrode, a second conductive electrode and an electroluminescent phosphor layer sandwiched between said transparent or translucent first electrode and said second conductive electrode, wherein said first and second electrodes each comprises a polymer or copolymer of a 3,4-dialkoxythiophene, which may be the same or different, in which said two alkoxy groups may be the same or different or together represent an optionally substituted oxy-alkylene-oxy bridge, comprising the steps of: (i) coating a transparent or translucent support with a solution, a dispersion or a paste of a polymer or copolymer of a 3,4-dialkoxythiophene to produce said transparent or translucent first conductive layer; (ii) coating said first conductive layer with a layer comprising an electroluminescent phosphor; (iii) optionally coating said layer comprising an electroluminescent phosphor with a dielectric layer; and (iv) coating said dielectric layer if present, or said layer comprising the electroluminescent phosphor if no dielectric layer is present, with a solution, dispersion or paste comprising a polymer or copolymer of a 3,4-dialkoxythiophene to produce said conductive layer, wherein said polymer or copolymer of said 3,4-dialkoxythiophene in the solution, dispersion or paste used in step (i) may be the same or different from said polymer or copolymer of said 3,4-dialkoxythiophene used in the solution, dispersion or paste used in step (iv) and wherein at least one of said two electrodes further comprises a polyanion compound.

29. (Previously Presented) A process for producing an electroluminescent device, comprising a transparent or translucent support, a transparent or translucent first electrode, a second conductive electrode and an electroluminescent phosphor layer sandwiched between said transparent or translucent first electrode and said second conductive electrode, wherein said first and second electrodes each comprises a polymer or copolymer of a 3,4-dialkoxythiophene, which may be the same or different, in which said two alkoxy groups may be the same or different or together represent an optionally substituted oxy-alkylene-oxy bridge, comprising the steps of: (i) coating a support with a solution, dispersion or paste comprising a polymer or copolymer of a (3,4-dialkoxythiophene) to produce said second conductive layer; (ii) optionally coating said second conductive layer with a dielectric layer; (iii) coating said dielectric layer if present, or said second conductive layer if no dielectric layer is present, with a layer comprising an electroluminescent phosphor; and (iv) coating

Application No. 10/614,148

Reply to Office Action

said layer comprising said electroluminescent phosphor with a transparent solution, dispersion or paste comprising a polymer or copolymer of a (3,4-dialkoxythiophene) to produce said transparent or translucent first conductive layer, wherein said polymer or copolymer of a (3,4-dialkoxythiophene) in said solution, dispersion or paste used in step (i) may be the same or different from said polymer or copolymer of a (3,4-dialkoxythiophene) used in said transparent solution, dispersion or paste used in step (iv) and wherein at least one of said two electrodes further comprises a polyanion compound.

30. (Cancelled)

31. (Cancelled)

32. (New) The process according to claim 28, wherein said paste is an aqueous paste.

33. (New) The process according to claim 28, wherein said transparent solution or dispersion is an aqueous solution or dispersion.

34. (New) The process according to claim 29, wherein said paste is an aqueous paste.

35. (New) The process according to claim 29, wherein said paste transparent paste is an aqueous transparent paste.

This listing of claims replaces all prior versions, and listings, of claims in the application.